

**IN THE CLAIMS**

Please cancel claims 1-18 and add new claims 19-27 as follows:

1-18. (CANCELED).

19. (NEW) A measuring electrode, which is used for measuring an electrical signal generated in a test animal or supplying an electrical signal to a test animal, wherein the measuring electrode comprises

an insulative holder and a plurality of electrode columns,

one end of each of the electrode columns is fixed to the insulative holder,

each of the electrode columns is disposed in parallel with a predetermined interval in a direction perpendicular to the longitudinal direction of each of the electrode columns,

each of the electrode columns is constituted by bundling a plurality of needle-shaped conductive leads,

each of the needle-shaped conductive leads is constituted by covering a needle-shaped conductive material with an insulative covering, and

a micro electrode is formed in each of the needle-shaped conductive leads by peeling a portion of each insulative covering from each of the needle-shaped conductive leads.

20. (NEW) The measuring electrode according to claim 19,

wherein the lengths of the needle-shaped conductive leads bundled together to form each electrode column differ from each other, and

wherein a micro electrode is formed at the tip of each of the needle-shaped conductive leads by peeling the insulative covering at the tip of each needle-shaped conductive lead.

21. (NEW) The measuring electrode according to claim 20,

wherein a plurality of the micro electrodes are disposed at a predetermined interval in a parallel direction to each of the needle-shaped conductive leads.

22. (NEW) The measuring electrode according to claim 21,  
wherein a plurality of the micro electrodes are arranged in a matrix.
23. (NEW) The measuring electrode according to claim 19,  
wherein each of the micro electrodes has an area of  $1\ \mu\text{m}^2$  to  $100,000,000\ \mu\text{m}^2$ .
24. (NEW) The measuring electrode according to claim 19,  
wherein an interval between adjacent two micro electrodes is 10 to  $10,000\ \mu\text{m}$ .
25. (NEW) The measuring electrode according to claim 19,  
wherein each needle-shaped conductive lead is cylindrical, and the cross section thereof is a circle having a diameter of  $1\ \mu\text{m}$  to  $1000\ \mu\text{m}$ .
26. (NEW) The measuring electrode according to claim 19,  
wherein the conductive material is any of gold, platinum, ITO, titanium nitride, copper, silver, tungsten, and conductive rubber.
27. (NEW) The measuring electrode according to claim 19,  
wherein the insulative covering is any of polystyrene, acrylic resins, polycarbonate and polyimide.